Maine APCD PC Access Analysis and Statewide Rational Service Area Update Plan

NOSORH Webinar
June 30, 2020
Objectives

• Understand the different underlying goals of defining RSAs for designation vs typical service/catchment area definitions

• Understand how the analysis of access patterns in claims data can provide crucial information to support the SRSA development process

• Explore the process of moving from the results of the claims analyses to development of SRSAs
Maine’s “Primary Care Analysis Areas”

- Established in 1979 and formally adopted by the Governor in 1980
- 62 PCAAs
- Separate definition for each discipline
**SRSAs: A very different approach**

- **Traditional Service Area Definition Process**  
  *(HSAs, Catchment Areas, PCSAs)*  
  - Provider/Resource Focused: Associate population groups with the resources they rely on for care  
  - Natural or ‘market driven’ patient flow  
  - Pop:Provider ratio assumes all residents of the SA have equal access to care

- **HPSA Service Area Definition Process**  
  - Community/Provider identifies need locally based on experience  
  - SA developed around that location and tested for availability of resources within parameters

- **Ideal SRSA Process**  
  - Population/Deficit Focused: Identify/aggregate populations experiencing barriers to access (pockets of need)  
  - Proactive: Does not require existing provider or local community to ask or identify need  
  - Differentiated: Sensitive to different barriers to care
SRSA Update Goals

• Identify pockets of unmet need
• Capture and reflect the different underlying barriers to access and capacity issues
• Rely on objective data driven methods to examine current patterns of access and quantify metrics of access difficulties
• Relate provider distribution and access to population-level indicators of underservice and lack of capacity
Claims Origin-Destination Analysis

• Same claims data specification already needed for low-income HPSA analysis, only **patient zip code** also included
  – Visits defined by CPT/HCPC codes
  – PC providers identified by NPI taxonomy (individual and organizational)

• Origin-Destination for each PC visit
  – Origin: Patient Zip Code
    • Population weighted centroid
  – Destination: Provider Service Location Zip Code
    • Post office or provider weighted centroid

• Non-Physician primary care providers included
  – Better reflection of true access and more practical to execute

• Limits imposed to eliminate extraneous patterns
  – Destinations with <= 10 claims from origin zip are excluded
  – 90 minute drive time limit on destination zip distance
**Claims Origin-Destination Matrix**

- Destination Zip from each Origin Zip ranked by % of visits
  - Kernel zips: Zip Code is its own primary destination for care
    - plurality of care provided internally
  - Non-Kernel zips: Shown as arrow to primary destination
  - “Preference %” shows portion following the primary pattern

<table>
<thead>
<tr>
<th>Origin_Zip</th>
<th>Destination_Zip</th>
<th>Claims</th>
<th>Total Origin Claim</th>
<th>% Preferred</th>
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<td>1410</td>
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<td>147</td>
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Maine All Payer Origin-Destination Dominant Flow Natural Service Areas
Access Analyses

- **Origin / Destination Travel time via GIS**
  - Drive time between zip pairs calculated based on shortest drive between centroids using road distance and speed limits

<table>
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<th>O/D Zip Codes</th>
<th>Drivetime (min)</th>
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- **Calculations**
  - **Average Travel Time**
    - Volume weighted mean travel time (by # of claims) for each origin zip
  - **Fractional Travel Time**
    - Percent of population traveling > 30 Minutes, >40 Minutes, etc.
  - **Visit Frequency**
    - PC Visits per ‘member-year’
  - **Hot Spot analysis**
• 88% of ME population lives in a zip code with < 30 Min mean travel time to PC visit
• Only 2% live in a zip code with > 40 Min mean travel time
- Note: 40 min travel time standard for MH & DH per HPSA regulations
- Dental insurance is mostly private and limited participation
Note: 319K Private claims, 53K Medicaid claims
Many fewer ‘kernel’ zips and O-D pairs for Medicaid
**Proposed SRSA Update Process**

- Sequentially assess population needs by priority
  - Priority 1 - Geographic Barrier service areas
  - Priority 2 - Financial-Barrier (population) service areas
  - Priority 3 - Areas Exhibiting other indicators of access problems
  - Priority 4 - Areas with no apparent access or capacity issues
- Assure adequate population and other RSA criteria
- PC areas first, then MH and Dental
- External Input?
- Impact testing to determine designation potential
RSA Analysis Tool

- Recalculates aggregate stats for area (demographics, P2P, travel times, utilization)
- Examines internally and externally provided portions of care (current pattern)
Further Potential for Claims O/D Analysis

- Compare utilization to ‘expected’ by age/gender

Examine Differential Access Patterns:
  - By Insurance Type or Plan/Network (APCD)
  - Stratify by life cycle, other demographic characteristics
  - Diagnosis-specific claim markers (diabetes, asthma)

Service-Specific Access:
  - Mammography, Dialysis, any service with clear billing codes

Test strength/porosity of service area boundaries

Examine alternate metrics of need

Similar methods can be applied to hospital and ED data
Questions?

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